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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/506,670

07/08/2005

Volker Lipka

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08/19/2008

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EXAMINER

IBRAHIM, MEDINA AHMED

ART UNIT

PAPER NUMBER

1638

MAIL DATE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/506,670	Applicant(s) LIPKA ET AL.	
	Examiner Medina A. Ibrahim	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23, 27 and 28 is/are pending in the application.
- 4a) Of the above claim(s) 9, 10 and 17-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-16, 27 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicant's response filed 05/19/08 has been considered. Claims 1, 3-5, 8, 11-16 are amended. Claims 27-28 are added. Therefore, claims 1-16, 17-23 and 27-28 are pending.

This application contains claims 9-10 and 17-23, drawn to an invention nonelected with traverse in the reply filed on 10/11/07. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

All previous objections and rejections not set forth below have been withdrawn in view of Applicant's amendment to the claims and/or upon further consideration.

Claims 1-8 and 11-16 and 27-28 are examined.

Sequence Listing

Applicant asserts that 37 CFR 1.1821(d) only requires the use of sequence identifiers in association with written description and claims but does not apply to drawing figures. Applicant assertion is incorrect. MPEP 2422.02 talks about the requirement for sequences presented in drawing figures and states ".....when a sequence is presented in a drawing, regardless of the format or the manner of presentation of that sequence in the drawing, the sequence must still be included in the Sequence Listing and the sequence identifier ("SEQ ID NO:X") must be used, either in the drawing or in the Brief Description of the Drawings". Therefore, Applicant is

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respectfully requested to identify the sequences on Figs. 9 and 12 and insert sequence identifier either in the drawings or in the in the Brief Description of the Drawings. If the sequences for Figures 9 and 12 are not included in the sequence listings 01/19/05, Applicant is required to submit a new Sequence Listing, which comprises said sequences and then amend the specification (in the Brief Description of the Drawings or in the drawings) to include SEQ ID NO:.

Specification

The disclosure remains objected to because of the following informalities: for example, page 47, 4th paragraph; and page 56, contains an embedded hyperlink directed to an Internet address. This objection is repeated for the reasons of record as set forth in the last Office. In the response filed 05/19/08, Applicant has neither amended the specification to remove hyperlink nor argued against the objection. Applicant is required to delete any embedded hyperlinks and/or other browser-executable code from the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8, 11-16 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duvick et al (US 6,433,249) in view of Harper et al (US 7,109,033 B2) and Micheltore et al (US 6,350,933 B1).

Duvick et al a method of transforming a plant with a DNA construct comprising an isolated nucleic acid encoding a polypeptide having beta glucosidase activity that is cloned into a plant expression vector comprising a pathogen inducible promoter operably linked to said nucleic acid, to produce transgenic plants having enhanced resistance to diseases and insects. The cited reference also teaches transformed plants and host cells expressing said polypeptide having beta glucosidase activity.

Duvick et al do not teach a nucleic acid encoding SEQ ID NO: 2

Harper teaches a recombinant nucleic acid/vector comprising a nucleotide sequence encoding a polypeptide that is 100% identical to Applicant's SEQ ID NO: 2 (see attached alignment of sequence, provided in the last Office action) and having beta-glucosidase activity (see SEQ ID N: 54 on Table 1; column 61) operably linked to a desired promoter such as an inducible promoter; and a method of transforming host cell/plant with said vector to produce transgenic plant having resistance against stress (see at least col. 4-5; paragraph bridging 13-14; col. 19-20, 29-34, and 43-49).

While Duvick et al in view of Harper et al teach the use of Applicant's nucleic acid encoding SEQ ID NO: 2 under the control of a pathogen inducible promoter, Duvick et al in view of Harper et al do not teach epidermis specific promoter. However, the use of epidermis specific promoters to express pathogen resistance genes was known in the prior art at the time this application was filed. Michelmore et al teach the use a epidermis specific promoter to control expression of the disease resistant RG polynucleotide to produce disease resistant plants (see at least column 11, lines 60-65).

Therefore, it would have been obvious to one of ordinary skill in the art to use the method of transforming a plant with a glucosidase encoding nucleic acid to produce a disease resistant plant as taught by Duvick et al, and to modify that method by incorporating the nucleic acid taught by Harper et al and with any desired promoter such as the epidermis specific promoter taught by Michelmore et al to produce transgenic plants having disease resistance activity with a reasonable expectation of success as taught by Michelmore et al. One would have been motivated to use a nucleic acid encoding Applicant's SEQ ID NO: 2, given that it has been shown to induce stress resistance in transgenic plants. One skilled would have a reasonable expectation of success to express any structural nucleic acid under the control of any desired promoter at the time this application was filed. One of ordinary skill in the art who desires to reduce or prevent epidermal disease would know that an epidermis specific promoter is suitable for expression of the desired disease resistance nucleic acid and would be able to produce resistance plants with no unexpected results.

In KSR International Co. v. Teleflex Inc. (KSR), 550 U.S. ___, 82 USPQ2d 1385

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(2007), the Supreme Court particularly emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art.” It states “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* at ___, 82 USPQ2d at 1395.

The Supreme Court further stated that:

“When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *Id.* at ___, 82 USPQ2d at 1396.” When considering obviousness of a combination of known elements, the operative question is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.* at ___, 82 USPQ2d at 1396.

See also *United States v. Adams*, . . . [t]he Court recognized that when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *Id.* at ___, 82 USPQ2d at 1395”; *Ex parte Kubin*, 83 USPQ2d 1410 (*Bd. Pat. App. & Int.* 2007); and *Ex parte Smith*...USPQ2d-at 20 (*Bd. Pat. App & Interf.* June 25, 2007) (citing KRS, 82 USPQ2d at 1396) (available at <http://www.uspto.gov/web/offices/dcom/bpai/prec/fd071925.pdf>).

Therefore, for all the reason discussed above, the invention as a whole was *prima facie* obvious.

Remarks

No claim is allowed.

Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Medina A. Ibrahim whose telephone number is (571)272-0797. The examiner can normally be reached on M-TH 8:00 am to 5:30 PM, and every other Friday from 8:00 AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAI
8/18/2008

/Medina A Ibrahim/
Primary Examiner, Art Unit 1638

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